

CLAIMS

We claim:

1. An implantable device for administration of a dopamine agonist to a mammal in need thereof, comprising a dopamine agonist and a biocompatible, nonerodible polymeric matrix,
wherein said dopamine agonist is encapsulated within said matrix, and
wherein when said implantable device is implanted subcutaneously in said mammal, said dopamine agonist is continuously released *in vivo* over a sustained period of time through pores that open to the surface of said matrix at a rate that results in a plasma level of at least about 0.01 ng/ml at steady state.
2. An implantable device according to claim 1, wherein the polymeric matrix comprises ethylene vinyl acetate copolymer (EVA).
3. An implantable device according to claim 2, wherein said EVA comprises about 33% vinyl acetate.
4. An implantable device according to claim 1, comprising about 10 to about 85% dopamine agonist.
5. An implantable device according to claim 4, wherein said dopamine agonist is selected from the group consisting of apomorphine, lisuride, pergolide, bromocriptine, pramipexole, ropinerole, and rotigotine.
6. An implantable device according to claim 5, wherein said dopamine agonist is apomorphine.

7. An implantable device according to claim 1, wherein the sustained period of time is at least about 3 months.
8. An implantable device according to claim 1, wherein the implantable device is produced by an extrusion process.
9. An implantable device according to claim 8, comprising dimensions of about 2 to about 3 mm in diameter and about 2 to about 3 cm in length.
10. An implantable device according to claim 9, wherein said implantable device releases about 0.1 to about 10 mg of dopamine agonist per day *in vitro* at steady state.
11. An implantable device according to claim 1, further comprising an anti-inflammatory agent encapsulated within said matrix.
12. An implantable device according to claim 11, wherein said anti-inflammatory agent is a steroid.
13. An implantable device according to claim 11, wherein said anti-inflammatory agent is a nonsteroidal anti-inflammatory drug ("NSAID").
14. An implantable device according to claim 11, wherein said anti-inflammatory agent is an antihistamine.
15. An implantable device according to claim 1, further comprising an antioxidant encapsulated within said matrix.

16. An implantable device for administration of a dopamine agonist to a mammal in need thereof, comprising a dopamine agonist and a biocompatible, nonerodible polymeric matrix,
wherein said dopamine agonist is encapsulated within said matrix, and
wherein when said implantable device is subcutaneously implanted in a mammal, said dopamine agonist is continuously released *in vivo* over a sustained period of time through pores that open to the surface of said matrix at a rate of at least about 0.1 mg of dopamine agonist per day at steady state.
17. An implantable device according to claim 16, wherein the polymeric matrix comprises EVA.
18. An implantable device according to claim 17, wherein said EVA comprises 33% vinyl acetate.
19. An implantable device according to claim 16, comprising about 10 to about 85% dopamine agonist.
20. An implantable device according to claim 16, wherein said dopamine agonist is selected from the group consisting of apomorphine, lisuride, pergolide, bromocriptine, pramipexole, ropinerole, and rotigotine.
21. An implantable device according to claim 20, wherein said dopamine agonist is apomorphine.
22. An implantable device according to claim 16, wherein the sustained period of time is at least about 3 months.

23. An implantable device according to claim 16, wherein the implantable device is produced by an extrusion process.

24. An implantable device according to claim 16, further comprising an anti-inflammatory agent encapsulated within said matrix.

25. An implantable device according to claim 24, wherein said anti-inflammatory agent is a steroid.

26. An implantable device according to claim 24, wherein said anti-inflammatory agent is a NSAID.

27. An implantable device according to claim 24, wherein said anti-inflammatory agent is an antihistamine.

28. An implantable device according to claim 18, further comprising an antioxidant encapsulated within said matrix.

29. A method for administration of a dopamine agonist to a mammal in need thereof, the method comprising administering at least one implantable device subcutaneously,

wherein each of said at least one implantable devices comprises a dopamine agonist encapsulated within a biocompatible, nonerodible polymeric matrix,

wherein said dopamine agonist is continuously released *in vivo* from each of said at least one implantable devices over a sustained period of time through pores that open to the surface of said matrix at a rate that results in a plasma level of at least about 0.01 ng/ml at steady state.

30. A method according to claim 29, wherein said at least one implantable device comprises a multiplicity of individual implantable devices, and wherein the combination of said implantable devices continuously releases dopamine agonist *in vivo* over a sustained period of time at a rate that results in a plasma level of at least about 0.05 ng/ml at steady state.

31. A method according to claim 29, wherein the polymeric matrix comprises EVA.

32. A method according to claim 31, wherein said EVA comprises about 33% vinyl acetate.

33. A method according to claim 29, wherein each of said at least one implantable devices comprises at about 10 to about 85% dopamine agonist.

34. A method according to claim 33, wherein said dopamine agonist is selected from the group consisting of apomorphine, lisuride, pergolide, bromocriptine, pramipexole, ropinerole, and rotigotine.

35. A method according to claim 34, wherein said dopamine agonist is apomorphine.

36. A method according to claim 29, wherein said mammal has Parkinson's disease.

37. A method according to claim 29, wherein said mammal has toxin- or disease-induced parkinsonism.

38. A method according to claim 29, wherein said mammal has a condition selected from the group consisting of erectile dysfunction and restless leg syndrome.

39. A method according to claim 29, wherein the sustained period of time is at least about 3 months.

40. A method according to claim 29, wherein each of said at least one implantable devices is produced by an extrusion process.

41. A method according to claim 40, wherein each implantable device comprises dimensions of about 2 to about 3 mm in diameter and about 2 to about 3 cm in length.

42. A method according to claim 41, wherein each implantable device releases at least about 0.1 mg of dopamine agonist per day *in vitro*.

43. A method according to claim 29, wherein each of said at least one implantable devices is subcutaneously implanted at a site selected from the group consisting of the upper arm, the back, and the abdomen.

44. A method according to claim 29, further comprising administration of an anti-inflammatory agent.

45. A method according to claim 44, wherein said anti-inflammatory agent is encapsulated in at least one of said at least one implantable devices.

46. A method according to claim 44, wherein said anti-inflammatory agent is encapsulated within a biocompatible, nonerodible polymeric matrix that does not comprise said dopamine agonist, and wherein said method comprises administration of said polymeric matrix comprising said anti-inflammatory agent subcutaneously.

47. A method according to claim 44, wherein said anti-inflammatory agent is administered via a route selected from the group consisting of local injection, systemic injection, subcutaneous injection, and oral administration.

48. A method according to claim 44, wherein said at least one implantable devices further comprises an antioxidant.

49. A kit comprising at least one implantable device comprising a dopamine agonist encapsulated within a biocompatible, nonerodible polymeric matrix, wherein when said at least one implantable device is implanted subcutaneously in a mammal, said dopamine agonist is continuously released *in vivo* from each of said at least one implantable devices over a sustained period of time through pores that open to the surface of said matrix at a rate that results in a plasma level of at least about 0.01 ng/ml at steady state and instructions for use in a method of administration of a dopamine agonist to a mammal in need thereof.

50. A kit according to claim 49, wherein said at least one implantable device comprises a multiplicity of individual implantable devices, and wherein when the combination of said implantable devices is implanted subcutaneously in a mammal, said implantable devices continuously release dopamine agonist *in vivo* over a sustained period of time at a rate that results in a plasma level of at least about 0.05 ng/ml at steady state.

51. A kit according to claim 49, wherein said implantable device releases dopamine agonist at a rate of at least about 0.1 mg per day *in vitro*.

52. A kit according to claim 49, wherein each of said implantable devices comprises EVA.

53. A kit according to claim 52, wherein said EVA comprises about 33% vinyl acetate.

54. A kit according to claim 49, wherein each of said implantable devices comprises about 10 to about 85% dopamine agonist.

55. A kit according to claim 54, wherein said dopamine agonist is selected from the group consisting of apomorphine, lisuride, pergolide, bromocriptine, pramipexole, ropinerole, and rotigotine.

56. A kit according to claim 55, wherein said dopamine agonist is apomorphine.